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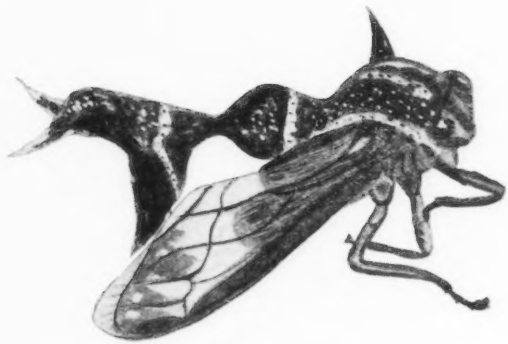
ENTOMOLOGICAL NEWS



Heteronotus vulnerans.

JANUARY, 1903.

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Ernest Swinhoe, 37 Addison Gardens, London W, England

Will correspondents kindly note that I have left Oxford and that in future my address will be as above.

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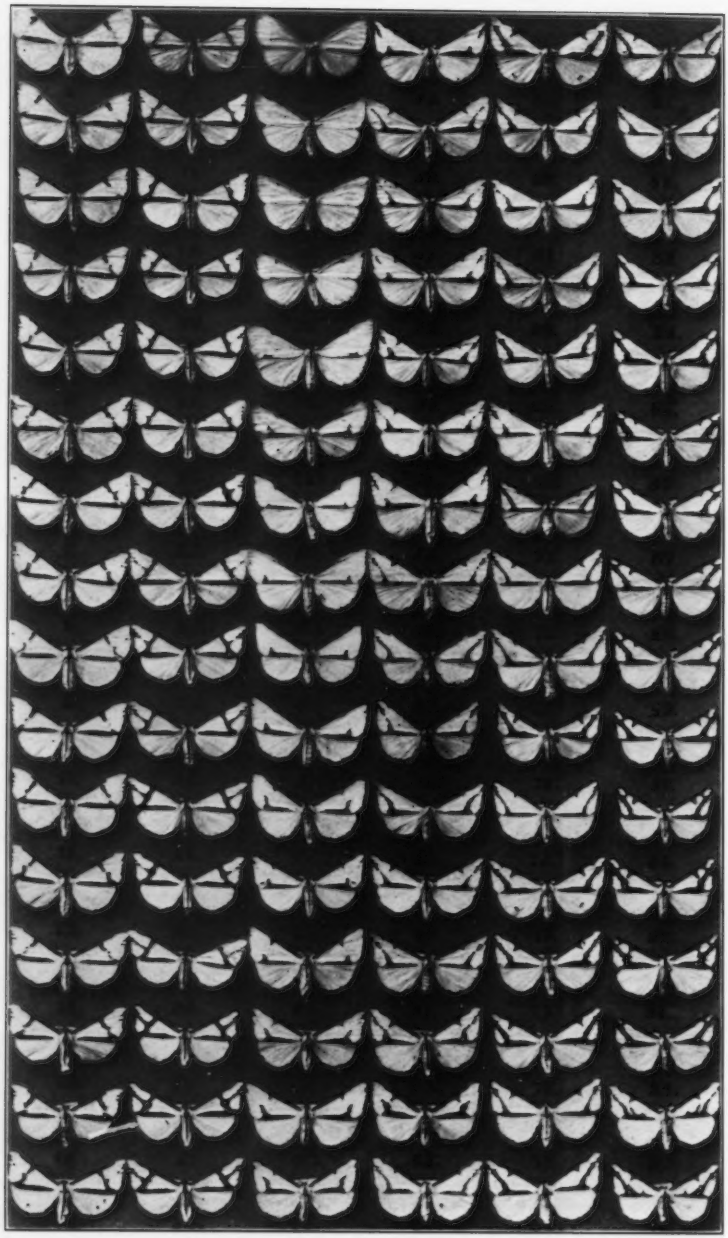

VARIATION IN HAPLOA (MERRICK).

ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

VOL. XIV. JANUARY, 1903. NO. 1.

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Variation in Haploa.

H. W. MERRICK, New Brighton, Penna.

The plate on the opposite page is interesting, I think, chiefly from the fact that the series of Haploas here shown are all selected from my catch of 1902, and are thus one season's brood, taken in quite a small piece of timber. Numbers 1–32, were taken on a hill-top covered with large hard wood timber, about three miles west of my home.

Numbers 33–96 were taken under similar conditions about one mile east of my home. The *H. contigua* (Nos. 1–32) and *H. militaris* (33–96) were selected from about an equal number taken of each species, and show much more variation in the latter than the former.

While the immaculate form of *militaris* is quite common, probably 25 to 30 per ct. of the entire brood, yet I have failed

to find a single example of the immaculate form flying with the *contigua*.

It is interesting to note that while *contigua* is never found in the east woods (where I take the *militaris*) nor is *militaris* found in the west woods (where I take *contigua*), yet the only *H. lecontei* I have ever taken locally was taken in the west woods flying with the *contigua*.

H. militaris flies from June 10th to 20th, the yellow form (*H. dyarii*) flying with them, but the *H. contigua* does not appear until about July 10–20th). *H. clymene* appears in the east woods about July 1–10, after *militaris* are gone, but does not appear in the west woods.

The colored boys (Nos. 95–96) were so named from their remarkable resemblance to the human figure, when the wings are folded at rest.

A series of this variable genus, even from one locality, would in a few years' collecting become quite interesting, while if formed by exchange from different localities widely removed, would become intensely so.

A proposed new genus of Odonata (Dragonflies) of the Subfamily Aeschninae, Group Aeschna.

By E. B. Williamson, Bluffton, Indiana.

(With plate II)

CORYPHAESCHNA* n. g.

Upper piece of arculus longer than the lower piece; subcostal vein not prolonged beyond the nodus; male with anal triangle of 2 cells, a distinct anal angle, and auricles on the second abdominal segment; supplementary sector between the lower branch of the subnodal and the median sectors curved widely from the lower branch of the subnodal, 4-8 cells separating them at the widest point, for ¼–⅓ its length the sup-

* *Coryphe* Gr. apex; *Aeschna*, a genus of Odonata, "a name introduced by former writers," probably *aischros* Gr. ugly.

plementary sector is parallel to the posterior margin of the wing; subnodal sector forking under the middle of the pterostigma (in hind wings 1 ♂, 1 ♀, *adnexa*, Mexico, the forking is at level of inner end of pterostigma), * 2 rows of cells in the fork, 2 or 3, rarely 4 cells at margin; supplementary sector between the principal and nodal sectors originating far beyond pterostigma; submedian and supratriangular spaces cross-veined, the first cross-vein of the submedian space placed proximal to the first antecubital; supplementary sector between the short sector and the upper sector of the triangle apparently originating as the most anterior vein from the outer side of the triangle; inner side of the triangle of the hind wing not half as long as the outer side; median and short sectors converging till beyond the nodus when the short sector apparently merges into the median, the continuation of the short sector to the margin of the wing apparently a branch from the short sector at a point on the short sector 2 cells distant from the point of union of the short and median sectors; this apical portion of the short sector is S-shaped and is separated from the median sector by 2 or 3 cells for the distance of 2 cells, then by 1 cell to the margin; † 1 row of cells throughout or 2 rows in the proximal half of the space between the sectors of the triangle of the hind wing; anal loop of 3 vertical rows of cells and supplemental loop behind it of 2 horizontal rows; ‡

*The upper branch of the fork is a continuation in direction of the subnodal, the lower branch springs from this. I do not understand Karsch's foot-note, p. 288 (see bibliography below), "*Aeschna ingens* Ramb., *A. juncea* (L.), *A. squamata* (Mull.), lassen mehrere feine Aeste des Subnodalsectors ähnlich dem Verhalten bei *Anax* Leach deutlich erkennen."

† The course of the short sector as found in *Aeschna juncea* undergoes considerable modification in the genus *Aeschna*. In *A. bonariensis* and *A. californica*, for example, a condition approximating *Coryphæschna* is reached, but in the *Aeschnas* the short sector appears forked with the upper branch merging into the median sector, while the lower branch is straighter than in *Coryphæschna*. Also in *Coryphæschna* the median and short sectors are more converging throughout their lengths than is the case in *Aeschna*.

‡Prof. Needham in 1897 drew up a tentative description of a new genus of Odonata with *ingens* as the type, naming several species of *Aeschna*

abdominal segments 3 and 4 similar in size and shape, in ♁ *adnexa* and ♁ *virens* 3 slightly constricted; superior abdominal appendages long and narrow, longer in the ♀, without teeth or hooks in either sex, and with only low keels. Segment 10 of ♂ without dorsal teeth.

Type.—Aeschna ingens Rambur. Insectes Névroptères, p. 192, 1842.

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I. Edm. de Selys Longchamps.—Synopsis des Aeschnines. Première partie: Classification. Bull. de l'Acad. roy. de Belg. 3me serie, tome V, No. 6; 1883, pp. 711–748.

II. F. Karsch.—Kritik des Systems der Aeschniden. Entomologische Nachrichten. Jahrgang xvii (1891), No. 18, Seite 273-290.

My original MS. describing this genus has undergone considerable modification as the result of notes furnished me by Dr. Calvert who has studied *Aeschna adnexa* and *A. virens*, species not accessible to me which, he writes, belong to *Coryphaeschna*. With these notes as a basis the above characterization of the proposed new genus has been broadened to include the 3 species, *ingens*, *adnexa* and *virens*. Future study of other species will probably necessitate still farther modification in this direction, the tendency being doubtless to include specific characters in a generic definition. Dr. Calvert has also studied 4 ♂ and 3 ♀ of *ingens*, and I am indebted to him for several suggestions embodied in the above description. Of *A. virens* he has studied 9 front wings and 9 hind wings of males, and 8 front wings and 8 hind wings of females; of *adnexa* 7 front wings and 8 hind wings of males, and 7 front wings and 7 hind wings of females.

---

as members of the proposed new genus. He has kindly placed this MS. in my hands, and to it I am indebted for the above character. In one wing of a ♀ *ingens* from Florida there are 2 vertical rows of cells in the anal loop. The supplemental loop is poorly defined in all the *adnexa* wings studied by Dr. Calvert, and in 1 ♀ of *virens* it consisted of 3 horizontal rows.

SOME VENATIONAL CHARACTERS OF FIVE GENERA OF ÆSCHNINÆ.

	ÆSCHNA.	CORYPHÆSCHNA.	EPIAESCHNA.	PLANAESCHNA.	NASIAESCHNA.
Inner side of triangle of hind wing.	More than half as long as outer side.	Not half as long as outer side.	Not half as long as outer side.	?	About half as long as outer side.
Supplementary sector between the short sector and the upper sector of the triangle.	Originating apparently as the most anterior of the veins arising from the outer side of the triangle. 3 or 4 rows of cells between the supplementary sector and the short sector, 1 or 2 rows of cells between at margin.	Origin similar to *Aeschna*. 2 or 3 rows of cells between the supplementary sector and the short sector, 1 cell between at margin. (Five rows of cells between supp. sector and short sector with 2 cells at margin in some *virens*.)	Originating apparently 1 row of cells anterior to the line on which it originates in *Aeschna*. 3 rows of cells between the supplementary sector and the short sector, 1 or 2 cells between at margin.	?	Originating as in *Epiaeschna*. 1 row of cells between the supplementary sector and the short sector throughout.
First cross-vein of submedian space.	Before the first antecubital (in *rufescens* same level in front wing).	Same as *Aeschna*.	After the first antecubital.	?	Like *Epiaeschna*.
Subnodal sector forking	At inner end of or, more usually, before the pterostigma.	Under the middle of the pterostigma. (See note on *adnexa* in generic description.)	Much before the pterostigma.	Midway between nodus and pterostigma.	Much before pterostigma.

	AESCHNA.	CORYPHAESCHNA	EPIAESCHNA.	PLANAESCHNA.	NASIAESCHNA.
Cells between fork of subnodal.	3 rows increasing at margin (in *erythromelas*, according to McLachlan's descriptions and in *melanictera*, according to Dr. Calvert, 2 rows, increasing).	2 rows, 2 or 3, rarely 4, at margin.	3 or 4 rows increasing to 8 or 9 at margin.	?	3 increasing.
Course of the short sector.	Slightly or abruptly diverging from the median beyond the level of the nodus; from this point of divergence 2 rows of cells between the sectors, which may become 1 or may continue as 2 rows to the margin. (See footnote † page 3.)	See description above under *Coryphæschna* n. g. also foot-note † page 3.	Scarcely separating; 2 rows of cells for short distance then 1 row to the margin.	?	Parallel to the median; 2 rows for short distance, then 1 row at margin and for short distance before 2 rows.
Supplementary sector between the principal and nodal sectors originating	Before, under, or just beyond the pterostigma.	Far beyond the pterostigma.	Under the pterostigma.	?	Under the pterostigma.

	AESCHNA.	CORYPHAESCHNA.	EPIAESCHNA.	PLANAESCHNA.	NASIAESCHNA.
Number of rows of cells between the sectors of the triangle in the hind wing.	2 (1 in *rufescens*).	1 throughout or 2 rows in the proximal half of the space between the sectors.	1 increasing.	?	1 increasing.
Number of cells in internal triangle.	2 or 1 (species with 1 may not be congeneric.)	1 or 2.	Usually 2 in front wing and 1 in hind wing.	?	1.
First cell of triangle.	Divided or not (species with first cell undivided may not be congeneric).	Very rarely divided	Divided in front wing, rarely divided in hind wing.	?	Rarely divided.
Number of rows of cells between the lower branch of the subnodal and the supplementary sector below it.	3 to 6.	4 to 8, usually 5 in *ingens;* usually 6 in *virens;* usually 4 in *adnexa.*	2, rarely 1.	1.	1.

The above study is based on the following material: *Aeschna grandis* ♀; *A. juncea* ♀; *A. cyanea* ♂, 2 ♀; *A. constricta* 2 ♂, ♀; *A. clepsydra* 2 ♂; *A. verticalis* ♂; *A. rufescens* 3 ♂; *A. mixta* 2 ♂, 2 ♀; *A. californica* ♂; *A. multicolor* 2 ♂, ♀; *A. minuscula* McLachlan's description; *A. subpupillata* McLachlan's description; *A. diffinis* ♂; *A. bonariensis,* photo of ♀, one side, by Prof. Needham; *A. erythromelas,* McLachlan's description; *Coryphæschna ingens* 3 ♂, 2 ♀, *Epiæschna heros* ♂, 4 ♀; *Planæschna milnei* McLachlan's and Sely's descriptions; *Nasiæschna pentacantha* ♀.

Coryphaeschna ingens (Rambur).

Abdomen: ♂ 68-71, ♀ 76-78. Hind wing: ♂ 55-56, ♀ 58. Thorax green, marked with brown. Abdomen black or brown, marked with green or yellowish green; segments 3-8 each with 3 narrow rings of color, the basal ring largely concealed by the apex of the preceding segment, the median ring anterior to the middle of the segment, and the apical ring separated from the extreme apex by a black ring; on the sides the basal ring is produced posteriorly, the other two anteriorly; mid-dorsal abdominal carina narrowly yellow (or green ?), with numerous small black teeth, the yellow darker or black at the median transverse ring of green. Auricles in 2 in the male inconspicuous by reason of size and color, green, the margin and the 3 or 4 teeth dark reddish brown or black; sternum of 10 in the female not greatly developed, truncated, with about 50 subequal teeth. Superior appendages about 1.5 mm. wide, and about 7.5 mm. long in the male and 12 mm. long in the female. Supratriangular space with 3 or 4 cross-veins; post costa in front wing slightly angled at the internal triangle, straight in the hind wing: submedian area in front wing with 4 to 6, in hind wing with 3 to 4, cross-veins, including the inner side of the internal triangle; antecubitals: frontwing, 18-22; hind wing, 13-17; postcubitals: front wing, 9-12; hind wing, 12-13; in the front wing the external point of the triangle is between the fifth and eighth cross-veins between the median and short sectors, in the hind wing between the fourth and sixth; 2 cells in the anal triangle of the male; length of pterostigma, 5 mm.; number of cells under pterostigma; front wing, 3 to 4; hind wing, 3 to 4.*

Distribution.—Georgia, Florida and Cuba. I have studied specimens from Florida collected in March and April by Mr. W. S. Blatchley, and Hubbard and Schwartz.

Synopsis of Three Species of Coryphæschna. †

By Philip P. Calvert.

C. ingens Rambur.

Dorsum of thorax predominantly reddish-brown, a green antehumeral stripe (which at its upper end may be confluent with a short green stripe which divides the upper half of the brown humeral stripe lengthwise),

* In such a short article as the above I have deemed it desirable at the present time to use the older and more familiar wing terminology rather than the preferable system proposed by Comstock and Needham.

† It must not be inferred, either from this synopsis or from the notes which I have furnished Mr. Williamson, that I assume any responsibility for the erection of this new genus. I have not made any researches to determine whether the separation of *Coryphæschna* be justified or not. —P. P. C.

which is nearly as wide as the brown humeral stripe. Sides of thorax green, a reddish brown band occupying nearly all of the metepisternum, and the anterior edge of the metepimeron, or merely forming a rather wide stripe on both sides of the second lateral suture. Tip of the vertex pale green, face bright green: the superior, curved, transverse groove of the anterior surface of the frons not filled with dark brown or black. Male with the third abdominal segment but very faintly constricted, the inferior appendage reaching to one-half the length of the superiors. Female with the four blackish spots on abd. seg. 2 transversely elongated, and the abdominal appendages extremely long. Abdomen (excl. apps.*) ♂ 58-61, ♀ 65; sup. apps. ♂ 7-7.75, ♀ 14; width of head ♂ 10.5-11.5, ♀ 11; hind wing ♂ 56-59, ♀ 58-60; pterostigma of front wings ♂ ♀ 6 mm.

Hab.—Georgia, Florida, Cuba. I have studied only Floridan examples.

C. virens Rambur.

Dorsum of thorax in life bright green, a line on each side of the median carina and a short, oblique, almost transverse, antehumeral line, brown. Sides of thorax green, brown confined to lines on the humeral and second lateral sutures. Tip of vertex pale green, face bright green; the superior, curved, transverse groove on the anterior surface of the frons not filled with black or dark brown (except in one Cuban ♀ which otherwise agrees with typical *virens*). Male with the third abdominal segment slightly constricted, the inferior appendage reaching to about three-fifths of the length of the superiors. Female with the four blackish spots on abd. seg. 2 nearly square, and the abdominal appendages moderately long. Abdomen (excl. app.) ♂ 50-57, ♀ 51-64; sup. apps. ♂ 5-6.5, ♀ 7 (?); width of head ♂ ♀ 10-11; hind wings ♂ 50-56, ♀ 51-60; pterostigma of front wings ♂ ♀ 4.5-5.5.

Hab.—Georgia (?), Cuba, Isle of Pines, Hayti, Trinidad, Mexico, Panama, Venezuela, Amazons, Bolivia. I have seen material from seven of these localities, details for which and for *adnexa* will be given in the Biologia Centrali-Americana.

C. adnexa Hagen.

Thorax as described above for *virens*. Tip of vertex blackish (green in two Mexican females), face bright blue (♂) or green (♀), the black T-spot of the frons extending on the anterior surface and filling up the superior, curved, transverse groove thereon (except in the Mexican examples). Male with the third abdominal segment slightly constricted, the inferior appendage reaching to one-third the length of the superiors.

* Contrary to my usual custom, I give the length of the abdomen for these species exclusive of the appendages, since the latter are so frequently broken off in the Aeschninæ.—P. P. C.

Female with the abdominal appendages moderately long. Abdomen (excl. apps.) ♂ 45-46, ♀ 47-48; sup. apps. ♂ 6 6.5, ♀ 7.5; width of head ♂♀ 8 5-9; hind wing ♂ 41.5-43, ♀ 42-43; pterostigma of front wings ♂ 3-7-4, ♀ 4.

Hab.—Cuba, Hayti, Mexico, Honduras, Amazons. All these localities are represented in the material I have seen.

EXPLANATION OF PLATE II.

Front and hind wings, from photographs (Williamson), of

1. *Aeschna juncea* Linn. ♀ x 1½.
2. *Coryphæschna ingens* Ramb. ♂ x 2.
3. *Epiæschna heros* Fab. ♀ x 2.

Three Undescribed Lepidoptera from Southern California.

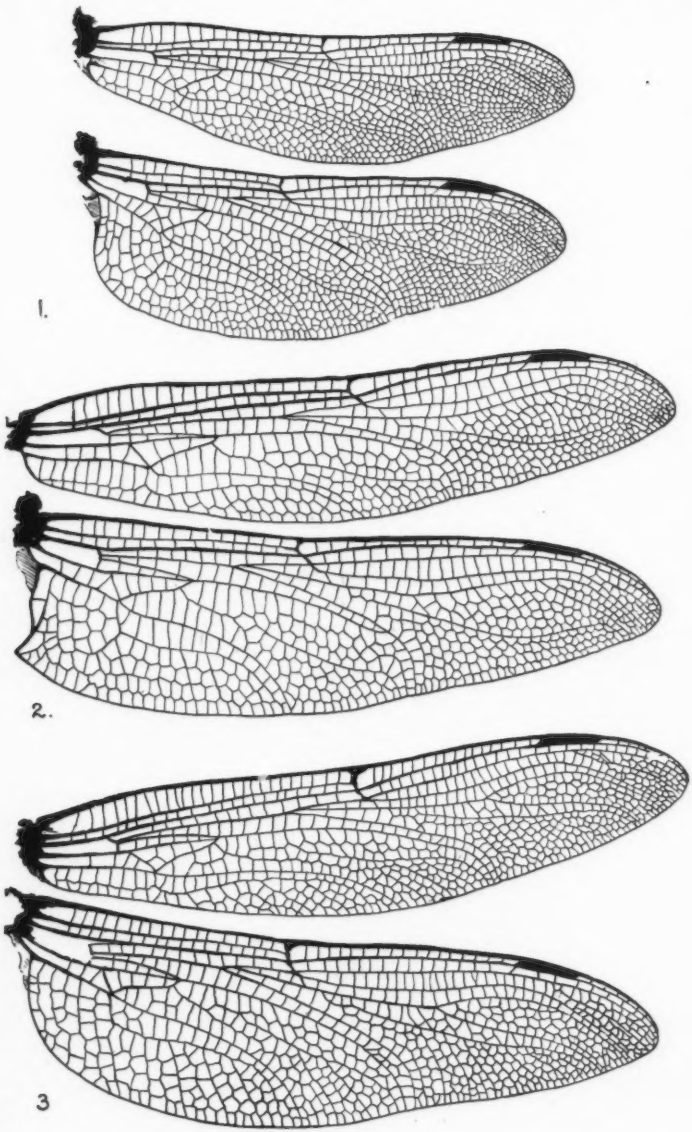
By Fordyce Grinnell, Jr., Palo Alto, Cal.

Thecla spadix Henry Edwards.—♂.—Expands $1\frac{1}{16}$ to $1\frac{5}{16}$ inches. Upper side, primaries, olive merging into hair brown towards the inner margin. Darkest towards the apex. Secondaries entire olive except the inner margin, which is drab. Underside faw n color on both wings. The primaries have a very faint line of dashes parallel to the outer margin, and a very faint discal spot. On the secondaries a comparatively large discal spot. An irregular row of dashes parallel to the outer margin, continuous with those of the primaries and about two-thirds of the distance from the inner margin. In the region of the median nervules close to the outer margin, there is a black crescent and dot enclosing a red spot. In the anal angle there is a black field overlaid with blue scales and a white spot between two black dots. Tails short, terminated with white. Body same color as the wings, but covered with quite long white hairs. Antennæ ringed with alternate white and black rings. Fringes white.

Habitat.—Mountains of Southern California.

Types 2 ♂, collection California Academy of Sciences, taken by the writer on Mt. Wilson, Sierra Madre Mountains, near Pasadena. Mr. J. Elmer Brown took specimens on Mt. Lowe in the same range of mountains.

I took most of my specimens on June 25 on Mt. Wilson, flying around the clumps of chaparral along the trail. It is the swiftest and most wary *Thecla* that I have had any experience with. A colony is usually found gyrating around some favorite shrub. After they become settled on a twig, it is



1. ÆSCHNA JUNCEA—(LINN) ♀. 2. CORYPHÆSCHNA INGENS—(RAMB.) ♂.
3. EPIÆSCHNA HEROS—(FAB.) ♀.

almost impossible to see them, and then the collector will have to be careful in the use of his net or he will ruin his weapon on account of the thorny and scrubby nature of the vegetation. I managed to take about twenty-five of these insects this year and only one female.

This species was described from one female taken by R. H. Stretch at Tehachepi Pass, and as far as I know, has not been noticed since or the male described.

Pamphila sabuleti var. **tecumseh** n. var.—Expands ⅞ inch. Differs from typical *P. sabuleti* by being considerably smaller and in having the black markings more extended. On the lower side the markings are not so heavy.

Habitat.—High Sierras of California.

The types which came from the Little Crabtree Meadow near Mt. Whitney, collected by Mr. Daggett, are deposited in the California Academy of Sciences. There are specimens in the latter museum collected by Hoffman, of the Geological Survey, many years ago.

This subspecies can be easily recognized from the typical form by its much smaller size, which is constant in a long series.

Anatolmis regulus, n. sp.—Expands $1\frac{3}{16}$ inches. Upper side of primaries entirely poppy red, with the exception of a black fringe extending from the outer third of the costa around to the inner angle. Secondaries poppy red with a trace of carmine, the black marginal band extending from the apex of the costal margin to the inner edge, where it occupies a little less than one-half of the wing, along the inner edge it occupies about one-third of the wing. The underside is same color as the upper but paler. Abdomen black or dark purple, also legs. Thorax poppy red. Antennæ purple.

Habitat.—Sierra Madre Mountains, Los Angeles Co., Cal.

Type in collection of the California Academy of Sciences.

Described from one specimen taken on Mt. Wilson June 25, 1902, flying along the trail through the brush; another was taken but it escaped. Mr. Brown took several in Milliards canon in the same range.

This species differs from *grotei* in not having any orange on the wings and in having the black margin very much narrower. *A. fulgens* has the secondaries almost entirely black and is smaller.

A List of Insects Taken in the Adirondack Mountains, New York.—II.

By Alex. D. McGillivray and C. O. Houghton.

DIPTERA.*

Mycetophilidæ.

Mycetophila punctata *Meigen.*
Sciophila pulchra *n. sp.*†
Sciara *Sp.*

Blepharoceridæ.

Blepharocera capitata *Loew.*

Culicidæ.

Culex impiger *Walker.*

Chironomidæ.

Orthocladius par *Coquillett.*
Ceratopogon *sp.*

Tipulidæ.

Limnophila macrocera *Say.*
Tipula strepens *Loew.*
Pachyrrhina ferruginea *Fabr.*
" pedunculata *Loew.*

Bibionidæ.

Bibio albipennis *Say.*
" femoratus *Wied.*
" xanthopus *Wied.*
Dilophus serraticollis *Walker.*

Simuliidæ.

Simulium hirtipes *Fries.*‡
" meridionale *Riley.*
" venustum *Say.*
" vittatum *Zett.*

Rhyphidæ.

Rhyphus alternatus *Say.*

Leptidæ.

Xylophagus persequus *Walker.* =
X. rufipes *Loew ?*
Chrysophila quadrata *Say.*
Leptis mystacea *Macq.*

Stratiomyidæ.

Beris viridis *Say.*

Tabanidæ.

Chrysops niger *Macq.*
" excitans *Walker.*
" sodius *O. S.*
" fugax *O. S.*
" mitis *O. S.*
Tabanus zonalis *Kirby.*
" lasiophthalmus *Macq.*

Asilidæ.

Cyrtopogon chrysopogon *Loew.*
Dasyllis flavicollis *Say.*
" posticata *Say.*
Laphria pubescens *Will.*

Therevidæ.

Psilocephala melanoprocta *Loew.*
" munda *Loew.*
Thereva flavicincta *Loew.*
" strigipes *Loew.*

Empidæ.

Empis rufescens *Loew.*
Rhamphomyia virgata *Coquillett.*
" nigricans *Loew.*
" rustica *Loew.*
Hilara tristis *Loew.*
" unicolor *Loew.*

---

* We are indebted to Mr. O. A. Johannsen for the determination of all the species embraced in this list.

† Described in the next article.

‡ An European species. Has also been found in Idaho.

Dolichopodidæ.

Dolichopus palaestricus *Loew.*
" scoparius *Loew.*
" *Sp.*
Psilopus scobinator *Loew.*

Syrphidæ.

Microdon tristis *Loew.*
Paragus tibialis *Fallen.*
Platychirus hyperboreus *Staeger.*
Melanostoma mellinum *Linne.*
Syrphus ribesii *Linne.*
" arcuatus *Fallen.*
" amalopsis *O. S.*
Sphærophora cylindrica *Say.*=S. scripta *Linne?*
Temnostoma bombylans *Fabr.*
" alternans *Low.*
Sericomyia militaris *Walker.*
" bifasciata *Williston.*
" chalcopyga *Loew.*
Sphecomyia vittata *Wied.*
Eristalis tenax *Linne.*
" transversus *Wied.*
Xylota curvipes *Loew*
" ejuncida *Say.*
" marginalis *Will.*
Syritta pipiens *Linne.*
Mallota cimbiciformis *Fallen.*
" posticata *Fabr.*
Volucella facialis *Will.*
Criorhina intersis ens *Walker.*
Pipeza pisticoides *Will.*

Pipunculidæ.

Pipunculus fusca *Loew.*

Conopidæ.

Zodion fulvifrons *Say.*

Muscidæ acalyptratæ.

Meromyza americana *Fitch.*
Phortica leucostoma *Loew.*
Loxocera fallax *Loew.*
Aciura nigricornis *Doane.*
Tephritis albiceps *Loew.*
Sapromyza lupulina *Fabr.*
Sapromyza notata *Fallen.*
" resinosa *Wied.*
Lauxania cylindricornis *Meigen.*
" obscura *Loew.*
Lonchea rufitarsis *Macq.*
Tetanocera arcuata *Loew.*
" flavescens *Loew.*
" plebeja *Loew.*
" saratogensis *Fitch.*
Scatophaga stercoraria *Linne.*

Muscidæ calpytratæ.

Anthomyiidæ.

Chortophila lævis *Stein.*
Homalomyia canicularis *Linne.*
Limnophora diaphana *Wied.*
Coenosia geniculata *Fallen.*

Sarcophagidæ.

Sarcophaga sarraceniæ *Riley.*
" 2 *spp.*

Muscidæ.

Muscina assimilis *Fallen.*
Hæmatobia serrata *Desv.*
Calliphora viridescens *Desv.*
Lucilia cæsar *Linne.*

Tachinidæ.

Cistogaster immaculata *Macq.*
Cryptomeigenia theutis *Walker.*
Gymnosoma fuliginosa *Desv.*
Melanophrys insolita *Walker.*
Exorista eudryæ *Towns.*
Peleteria rubusta *Wied.*
" tessellata *Fabr.*
Echinomyia florum *Walker.*
" algens *Wied.*
Tachina rustica *Fallen.*
Epalpus signifera *Walker.*
Metopia leucocephala *Rossi.*
Hypostena barbata *Coq.*

Notes on Some Adirondack Diptera Collected by Messrs. MacGillivray and Houghton.

By O. A. Johannsen.

The following notes are published as supplementary to the "List, etc.," given by Messrs. MacGillivray and Houghton in the preceding pages. All the flies were collected near Axton, N. Y., in June, 1901.

Limnophila macrocera Say. Compl. Wr. ii, 46.

A single male specimen in the collection agrees with Osten Sacken's description in Monographs, etc., iv, p. 294, in every particular excepting that it possesses two supernumerary cross-veins in the cell R_2 (Comst.) proximad of the cross-vein of cell R_1 in the one wing, and one supernumerary in the other.

Pachyrrhina pedunculata Loew. Centur. iv, 24.

♂.—In the specimen in hand the sides of the first abdominal segment are yellow.

Sciophila pulchra, n. sp.

This fly differs from *S. subcærulea* Coq. in the following particulars: The thorax has no bluish tinge, the mouth parts are black and not yellow, and the antennæ are gray. Length, 10 mm.

♀.—Black, polished, with a brownish tinge. Palpi black, basal joint yellowish; face, front and occiput shining black. Antennæ fuscous, with whitish, very short appressed pile. Dorsum of the thorax, scutellum, metanotum and pleuræ polished black, sparsely covered with very short pale hairs; the prothoracic spiracle, the dorso-pleural suture, and behind the root of the wings slightly yellowish. Abdomen shining black with a brownish tinge, especially at the incisures and the venter. The hairs covering the abdomen are short and pale. Femora and coxæ, and anterior and middle tibiæ are a deep yellow; hind tibiæ are slightly infuscated, all tarsi are brown, darker apically; tips of the posterior femora and of all tibiæ are brown. The middle femora have a short stout blunt spur on the under side near the apex; the fore and hind tibiæ each with one, the middle tibiæ with two spurs. The wing venation resembles figure 8a, plate xix, in Winnertz' "Pilzmuecken," the forking of the Cubitus (Comst.) being proximad of the cross vein, but differs in that the small cross vein is nearer the base of the small cell; R is straighter, and R. 4+5 is slightly curved forward so that the distal third is parallel with R_1

and ends more than the length of the posterior cross-vein before the tip of the wing. The cell R_1 is about one-and-a-half longer than broad. The wings are short haired: the veins are yellow excepting the cross-veins which are dark brown. Covering the posterior cross-vein is a pale brown cloud, and near the apex below $Radius_1$ is another. The halteres are a dusky yellow or brown, the base of the peduncle is yellow. Described from one specimen taken June, 1901.

Sciara, sp.

A single female specimen agrees with Winnertz' description *S. carbonaria* Meigen. The wing venation is like that shown in tab. v, fig. 1, of Lundbeck's Diptera Groenlandica.

Dilophus serraticollis, Walker, List, etc, i, 117.

One male and one female specimen. Both the male and the female have a toothed ridge upon the pronotum and another upon the anterior part of the mesonotum; a row of spines on the middle of the anterior tibia and the usual crown of spines at the tip. The hind coxæ are somewhat infuscated. The female differs from *D. obesulus* Loew. in having no rufous on the pleuræ.

Simulium hirtipes Fries. Monogr. Simuliar. 17.5, 1824. Schiner, Fauna, ii, p. 368.

As far as I am aware this is the first record of this fly in America. I have compared them with specimens from Europe and found them identical. The fly is very common during May and the early part of June. Specimens have also been received from Ithaca, N. Y., and from Idaho.

Thereva strigipes, Loew., Centur. ix, 72.

The open cell $Media_3$ would place this species in the genus *Dialineura* Rond. The specimen in hand has a brownish black thorax with two narrow longitudinal stripes not mentioned in Loew's description. In other respects it agrees perfectly.

Xylota marginalis, Williston. Synopsis, p. 226.

Of three specimens two agree with the description given by Prof. Williston: the third differs as follows: The fore tibiæ are brown, the middle and hind pairs are black, their bases yellowish. The first and second abdominal segments are black,

the latter with two small transversely oval red spots near the posterior margin; the third and fourth are red, the former with a black median stripe and black lateral and posterior margins, the latter with black on the disc.

Volucella facialis, Williston. Synopsis, 137.

The specimen agrees with the description of *V. facialis* (a Californian species) in having the yellow face, the black pile on the dorsum of the thorax and the yellow pile on the fourth and fifth segments of the abdomen; but it also has yellow pile on the pleura, in this respect agreeing with *V. evecta* Walker.

Pipeza pisticoides, Will. Synopsis, p. 29.

The specimen (female) has the third joint of the antenna a little longer than wide; the pile on the abdomen is about as long as that on the eyes; and the tibiæ are brown with paler extremities. Length, 6 mm.

Aciura nigricornis, Doane. Jr. N. Y. Ent. Soc., 1899.

In this specimen (a female) there are four scutellar bristles instead of two, as stated by Mr. Doane. The abdomen (which is wanting in Mr. Doane's specimen) is a shining black, except the first segment, which is reddish yellow with a slightly darker posterior margin.

Sarcophaga, sp. a.

♂.—This species goes into the couplet with *S. atropos* in Dr. Schiner's key. It differs as follows. The abdominal spots appear grayish white with a bluish tinge when viewed from behind and yellowish when viewed from in front, the frontal stripe is wide and dull black, the rest of the front and sides of the face golden. The cheeks are black with black hair. The thoracic markings are as given by Schiner for *S. atropos;* the dorsocentrals 4.4; sterno pleurals 2.1; the thorax, abdomen, and legs excepting the tarsi with long fine nearly erect hair among the setæ. The hair on the inner side of the hind tibia is nearly as long, but not so dense, as with the European *S. carnaria.* The middle tibiæ have four or five, the posterior pair have nine or ten setæ besides the apical ones. The genitalia of the male are elongate, black, the anal segment is black with a gray posterior margin. The articulation of the claspers is reddish brown. The basal section of R_{4+5} is bristly half way to the small cross-vein. The female is like the male excepting for the sexual characters. Length, 9-10 mm.

Sarcophaga, sp. b.

This species goes into the couplet with *S. affinis* Zett. in Dr. Schiner's key. The abdomen may be called tessellated. The male genitalia are inconspicuous. From *S. affinis* it differs in having a small costal spine on the wing; the elongate black spots on the abdomen are arranged in three rows, confluent on the hind margin of each segment. The tibiæ have but few bristles. Dorso-centrals 3.3; sterno-pleura s 1.1. 1. Vein R_{4+5} has 3 or 4 bristles near the base. Male and female. Length 7 mm

A Trip After Papilio Homerus.*

By Captain Wirt Robinson, U. S. A.

We sailed June 14 for Colombia, landed June 23d at Savanilla, and that day went on to Barranquilla. I caught in my hat, from car window as we went along, a huge metallic buprestid. On arriving at Barranquilla, to my disgust, I found that we would not be allowed to use our guns, to leave limits of town, to go out of doors after dark, our mail was opened, we were followed by spies, and altogether so molested that I made up my mind to clear out at once, and returned next day to the wharf to catch our steamer. Found there another steamer of same line bound back for Jamaica, and transferred to her. On night of 24th caught on deck of our steamer a small sphinx which I think is *Aellopos tantalus*. On morning of 25th, before we sailed, got permission to leave wharf and go ashore after insects. Caught a few insignificant things, and found a bush covered with white caterpillars, rather flat than thick, size of *H. io* caterpillars, but with long brownish red hairs at base of which were clumps of small red spines: a few of these were already spinning cocoons, so we gathered them in, over 100 in all. In so doing were frightfully stung, the pain increasing after we got aboard and enough to drive us nearly distracted. The cocoons greyish and flat and plastered to tree trunk, several in clumps. Inside a compact case with flaps or valves at end. The chrysalid emerges, pierces outer loose silk and after this fly emerges leaving chrysalid case protruding like goat moths! Our worms made over 100 cocoons, and they began to hatch on way back north from Kingston, giving those moths which you identify as belonging to *Gasina*

* Extract from a letter to Prof. E. J. Smith, Jr.

sp. The female is much larger than the male. Although these hatched, only a few came out and fewer yet were perfect. They hatched during the night and the males were all battered by daybreak. Only a small per cent. hatched, the majority have been steadily giving me crops of large flies, like those which are found at times in our *cecropia*, but only one from each cocoon. On the day we left we also caught the ♀ *Pap.* (*near P. alyattes*)? which flew across the deck of our steamer just as we were leaving.

Reached Kingston, Jamaica, evening of Friday, 27, and before turning in I made a bee line for Mr. C. B. Taylor, whom I met on trip down, who had collected for years in Jamaica and knew localities, etc. He had told me that he expected to leave in a few days for the mountains, and I was afraid he might be gone. Found him in and learned from him that nearly all *homerus* ever taken on the island had been found near Bath, at eastern end. He, in all his years' collecting, had only gotten three. One he raised from caterpillar, two others, ♂ and ♀, were caught by his brother-in-law as they were in connection on sand on edge of Devil's River (1½ miles from Bath). His brother-in-law was in bathing when female lit on sand and began sucking, and almost at same time male came to her, and he caught both with his handkerchief! Taylor said that I would be lucky if I got two in three years. Saturday, June 28, we went out in trolley car to Hope Botanic Gardens, and got a number of flies, nothing very good or in very good condition. The Gardens cover 200 acres. In one place I noticed several acres of Cuban tobacco gone to seed. I immediately laid my plans, went back to the hotel and got my reflector hunting lamp and returned before dark. Got in two hours about 50 sphinges of 9 species. 10 *cingulata*, 7 *vitis*, 8 *jamaicenses*, 1 *brontes*, 1 *ello*, 2 *tersa*, 11 *labruscæ*, 6 *Anceryx alope*, 2 *duponchelli* and missed several *ficus*. Also got the little *C. nobilitella*, *Pap. polycrates*, *Terias elathea*, etc. The next night got 25 more, 1 *ficus*, 1 *labruscæ*, 4 *vitis*, 1 *lineata*, 1 *brontes*, 1 *ello*, 5 *Anceryx alope*, 5 *jamaicensis*, 3 *cingulata*. Next night, Monday, June 30, 25 more, 5 *jamaicensis*, 6 *alope*, 1 *cingulata*, 3 *vitis*, 1 *ello*, 5 *labruscæ*. We left Kingston Tuesday, A. M.,

July 1st, on a little steamer to Port Morant, arrived P. M., and drove over to Bath, 10 miles, took quarters at Mrs. Duffy's. Here we worked hard until July 10th, with very little results, got a few poor *Pap. pelaus;* many *Victorina steneles* (commonest fly on island next to *Anaitia saturata*), some fine *Erebus odora*, and smaller yellowish moth; some *Gynæcia dirca*, *Callisto xangis*, a few more sphinges at a little patch of tobacco; a fine male *Aganisthos orion* (which mouse carefully chewed up other night); few *Agraulis vanillæ*, *E. hegesia*, *Danais jamaicensis*, etc. We wasted much time because of Mr. Taylor's suggestion of Devil's River. We waded this daily and fought mosquitoes and heat and brush, but to no avail. July 10th my brother was a little ailing. I was discouraged, but went out determined to make one more attempt. I took the trail to the Cuna Cuna Pass, which in a little over six miles climbs 2,700 feet. I made up my mind to push on to the summit. I had along my cane gun and when within a mile of the summit shot a queer flycatcher sitting on a twig over the path. I carried it along for 50 yards until I reached a convenient stone and sat down to wrap it up in cotton to put in my collecting basket. Whilst sitting here I happened to glance up the road and 50 yards ahead of me, sailing slowly towards me, I saw the big shape of black and yellow that I had been straining my eyes for. I grabbed my net and made for it at full speed. It was coming along and would pass out of reach above me. I scrambled up on the steep bank to my right, and as it got abreast, made a wild leap into the air and struck, hit it full, but, as happened a number of times thereafter, the fly refused to slide into bag of net, and was knocked out. I fell on all fours on the ground and saw my prize hit the grass six feet ahead of me, and with a spring like a tiger, got the net over it before it recovered. They do not flutter in the net, but crawl about with much dignity. I killed it and then realizing finally that I had it, I got buck fever and began to tremble so I could not stand up or take it out of my net for several minutes. I wish you could see one of these beauties when fresh and velvety. After recovering I went on to the summit, but found nothing except the rare *Ithomia*. Returning I looked up a precipitous

slope and saw three *homerus* and a few blossoms on a bush. I climbed up but they were out of reach, and after sitting for some time with my mouth watering, I gave up and started home. When I had gone a mile I stopped and began to reflect. I had found *homerus* at last. Why not stick to them until dark, so back I went. The same three were around the tree, and I sat far below in the path watching and slapping mosquitoes. I think I hypnotized them, for after a while one came floating slowly down through the air. I saw he was approaching the road, so ran to be just beneath him. When he reached the road he followed it for some 30 yards, I behind him, and at last he dipped down and I had him. In two hours I caught five more. I then had to return as the way was long and road rough. I came in done up but happy. The next day I was too sore to move, but the second day we packed up our camp cots and satchels and went up into the pass to a small cluster of negro huts within 1½ miles of our locality. We hired a hut at $1.00 a week, got servant 25 cents per day, chickens 25 cents a piece, bread, vegetables and eggs, and set in housekeeping. The morning we arrived I caught fine male *Pap. thersites*, the only one I got. We kept on up to my locality and got before 4 o'clock 6 more *homerus*. The next day, Sunday, July 13, we got 15, and July 14 got 6; on 15th it rained heavily and we got but 2. It rained every day and nearly all the time, but we caught them between showers. On night of July 15 we had 36—no females so far. Next morning my brother went down to Bath for mail, I up mountain alone, *homerus* hardly appeared before 8.30. I timed them this morning to see how often they appeared. Here is record. One at 8.40, first seen; one at 8.45, one 8.50, one 8.52, one 8.55, one 9.00, one 9.02, one 9.03, another 9.03, one 9.05, one 9.08, one 9.10, one 9.22, when I left to go to a better spot, as these were all out of reach and kept on out of sight. The mountain side was slippery from rain. I slipped and my heel was torn off and shortly after had another slip. Fell only two feet, but sat on sharp stake which penetrated my trousers, side of my leg, four inches up into my rectum and broke off. Of course for the first second I was sick, but got stick out easily and started back; lost consider-

able blood, but got to hut as my brother returned. Didn't have much pain but flowing of blood from rectum made me uneasy for fear of internal puncture, so thought best to keep on down to Bath before I got any worse. Walked along slowly and caught on way a female *Aganisthos orion*, so you can see "ruling passion strong in death," etc. Got to Bath, had chill and fever; young doctor came in and examined me; found I was badly lacerated, but nothing worse. I stayed in bed two days, but thoughts of those *homerus* pulled me out, and on July 19th back we went. Got that day only two, one a wretched female so battered that we did not keep her. I was too sore to run and my brother did all the work. The 20th we got seven, making 44 in all, one female among them, a total wreck, but I brought her along. That night I was awake all night, fever and great pain, and my wound discharging pus copiously; too much exertion I think. Anyhow, thought I had better leave at once; left at daybreak; drove that day 38 miles to Port Antonio and left next afternoon on steamer, reaching New York July 23. A doctor on the steamer fixed me up with carbolic wash, quinine, etc., so I was all right on landing, but pretty weak for some days.

The Seventeenth American Kermes (Coccidae).

By George B. King, Lawrence, Mass.

Kermes arizonensis N. sp.—Dead dry adult females globular variable in size, transverse diameter 3 and 5 mm. Color grayish white, distinctly marbled with a light yellow or reddish brown, and having four prominent linear transverse dark brown bands, somewhat wavy, due to quite large pits at intervals; surface not shiny; speckled with minute black dots. Dead dry half-grown individuals, dark red brown Antennæ apparently only 5-jointed; joints 1 (20), 2 (20), 3 (40), 4 (20), 5 (32) μ long. Derm colorless. Rostral loop stout dark brown. Mentum small, no legs or other structural characters found.

Hab.—On oak at Prescott, Arizona, collected by Prof. T. D. A. Cockerell, March, 1902. (The species has gone as *Kermes galliformis* but has only been superficially compared. Ckll. in litt.) It is, however, quite distinct from *K. galliformis*. In some of its markings it resembles *K. cuerœnsis* Ckll. described

as a variety of *galliformis* which I believe to be a good species. *Arizonensis* is separable from *cuerœnsis* by its smaller size with distinct deep transverse brown bands with pits at intervals, and distinctly marbled with light brown. It is the second species of *Kermes* to be recorded from Arizona.

Since the publication of my paper on the *Genus Kermes of North America* in Psyche, vol. 9, p. 78-84, 1900, one other species has been described, viz. : *Kermes trinotatus* Bogue, taken at Stillwater, Oklahoma, on *Quercus nigra* and also found at Albany, N. Y., New Brunswick, N. J., and Atlanta and Tifton, Georgia, on *Quercus aquatica*. *K. pittiti* Ehrh. and *K. galliformis* Riley, have been recorded from Middletown and Brooklyn, N. Y. *Kermes andrei* King, has been found by Prof. Scott at Atlanta, Georgia, on *Q. stellata* and just recently I have received for identification from Prof. Cockerell, June 24, 1902, *Kermes pubescens* Bogue on *Q. macrocarpa*, and *K. andrei* King, on *Q. prinus* found at Columbus, Ohio, by Mr. J. A. Sanders, Westville, Ohio.

The following literature has also appeared :

Canadian Entomologist, vol. 32, p. 205, 1900, gives the description of *Kermes trinotatus* Bogue.

Bull. No. 26 N. Sr. U. S. Dept. of Agr., div. of Entom., p. 52, 1900, the species cited as a new species is *K. andrei* King.

Bull. N. Y. State Museum, No. 46, vol. 9, p. 356, 1901.

Some Notes and Descriptions of Three New Leptidae.

By Chas. W. Johnson.

Rhachicerus nitidus n. sp.

♂ ♀.—Face and front black, shining, except a patch of silvery white pubescence above the base of the antennæ and between the emarginations of the eyes, the indentation shining black ; antennæ black composed of 22 joints, not pectinate in the ♀, and only slightly pectinate in the ♂, mouth parts yellowish. Thorax and abdomen black, shining, with yellowish microscopic hairs ; humeri dull yellow ; halteres and legs light yellow, the posterior tarsi somewhat brownish. Wings grayish hyaline, stigma brown, with a brownish tinge below, most conspicuous in the ♀. Length, 6 mm.

Two specimens, bred June 2, from larvæ obtained in a decayed log at Overbrook, near Philadelphia, Pa., April 17.

Larva yellowish-white and similar in general appearance to that of *Xylophagus abdominalis*, but much smaller (8 mm.). Pupa reddish brown, the antennal processes proportionately larger and curving backwards with a small anterior projection at the base of each, extending toward the center, but hardly meeting.

Xylophagus abdominalis Loew.

On March 20, 1897, I obtained at Riverton, N. J., from beneath the bark of a dead pine, in the early stages of decay, half a dozen larvæ, which proved, on reaching maturity (April 5) to be *X. abdominalis* described from Texas. Being placed in a small glass jar two of the larvæ pupated in a few days; while two showed their carnivorous habits by thrusting their sharp mouth parts into the other two. This act of cannibalism was probably forced upon them by being confined in such close quarters with no other food, as they usually feed on various wood-eating larvæ. The larvæ were represented by two sizes, the larger, which proved to be the ♀, was about 21 mm. in length, while the smaller, which developed into a male, was only 16 mm. Larva white, cylindrical, composed of twelve segments (including the head) and covered with a thin parchment-like skin; the three segments back of the pointed black head are chitinized above; entire in one, in others divided into two or three squares; the last segment has a chitinized plate above, terminating in two hook-like processes; at the bases of the fourth to the ninth segments are rows of transverse bristly pseudopods; similar rows of bristles are also present above; on the sides in the middle of each segment are tufts of three or four white hairs. (Fig. 1.)

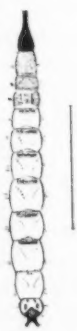


FIG. 1.

FIG. 2.

Pupa horn-color, the anterior end bearing prominent, annulated, antennal processes, while below the developing mouth-parts are also visible; on the thoracic section the developing wings and legs are folded on

the sides and breast as distinctly as in a lepidopterous pupa ; the abdominal portion consists of seven segments, which have basal and sub-central rows of bristles, and dark brown shining spiracle nodes ; the end of the terminal segment is bispinose, with spine-like bristles on the sides. Length, ♀, 17 mm. ; ♂, 13 mm. (Fig. 2.)

Loew's description was based on a ♀, with which the New Jersey specimens agree in every respect except that only the second, third and fourth segments are red, the fifth being black ; a specimen from Michigan also has the fifth segment black. Length, 15 mm.

The male, which has not been described, differs from the female in having the abdomen entirely black and measuring only 11 mm. in length.

Xylophagus lugens Loew, was also bred from larvæ found in decayed oak and chestnut ; they resemble those of *X. abdominalis* except that one less segment is chitinized. The pupa has the antennal processes more recurved, lying close to the side of the cephalic portion, with a short hook-like spine, extending laterally from the base of each.

Xylomyia americana Wied., and **Xylomyia tenthredinoides** v. d. Wulp.

Xylophagus americanus Wied. Dipt. Exot. i, 51 ; auss. zw. i, 84.

Subula tenthredinoides v. d. Wulp. Tijdschr. voor. Entom. ii, 2 ser. 132, Tab. iii, f. 5.

On June 1 Mr. E. Daecke captured at Castle Rock, Delaware Co., Pa., a number of Xylomyiæ which has lead me to make a more careful study of the descriptions of *X. americana* and *X. tenthredinoides*. The specimens all lack a distinctive feature clearly given by Wiedeman, viz. : Middle of the first segment black, sides yellow ; the second and third segments red, with a posterior margin of yellow, in front of which is a short transverse line of black ; the remainder of the segments red, margined posteriorly with yellow. A ♀ collected by Mr. Chas. A. Voelker, at Clifton, Delaware Co., Pa., and a ♂ from Mr. R. J. Weith, Elkhart, Ind., agree with Weidman's description.

Xylomyia tenthredinoides has the first segment entirely black, or with the posterior half reddish and the remaining segments red without the yellowish posterior margin. In the ♀ a blackish lateral margin extends from the first to the fifth segments,

evanescent on the latter; the outer half of the posterior femora and tibiæ are dark brown or black; on the dorsum of the thorax the two clearly defined yellow lines and lateral spots are wanting, while the humeri in the ♀ is black. Besides the specimens collected by Mr. Daecke, I have a specimen (♀) from Dr. W. A. Nason, Algonquin, Ill., June 9, and one (♂) collected at Natrona, Pa., July 12. The two species which have been united by Loew (Zeits. f. Ges. Naturw. xxxvi, 114) seem to be readily separated by the above characters.

Xylomyia aterrima n. sp.

♂, ♀.—Black, somewhat shining; a spot on each side above the base of antennæ and the frontal and facial orbits, whitish pubescent; antennæ black. Humeri, a lateral line extending to the base of the wing, post-alar callosities, middle of the scutellum, and a spot on each side of the metanotum (in the male) yellow. Halteres yellow with a brown spot at the base of the knob. In the male there is a slight trace of a posterior margin of dark brown on the segments of the abdomen. Legs variable, in the male the first and middle femora and tibiæ are yellow and in the female dark brown; hind femora of the female entirely black, basal half yellow in the male; outer half of the posterior tibiæ black; tarsi brown, basal half of the posterior metatarsi yellow; coxæ black, the posterior half yellow; in the male a greenish yellow tint seems to predominate. Wings brownish hyaline. Length, 12 mm.

The two specimens on which this description is based have been in my collection for a number of years. The ♂ from "N. Ill." was given me by the late Andrew Bolter, and the ♀ from Franconia, N. H., was collected by Mrs. Annie T. Slosson. I feel confident that a number of specimens would eliminate all discrepancies.

Symphoromyia cinerea n, sp.

♂, ♀.—Entire body dull gray or ash-color, with short whitish and longer blackish pile, and with the lighter colored pile predominating in the male. Antennæ reddish or brown, the first joint moderately enlarged, grayish with long white and black hairs in the male, and short black hairs in the female, the small second joint noticeably darker than the others, third joint comparatively small in the male, no wider than the first joint, and in the female but slightly wider, aristæ black, mouth parts yellowish. Thorax with three obscure brownish stripes, the wide dorsal stripe divided anteriorly by a fine hair line, the sub-dorsal stripes divided at the suture forming two oblong spots, a small obsolete spot, also present above the base of the wing. Legs yellowish, all except the metatarsi dark brown,

femora more or less brownish, especially in the male, halteres light yellow. Wings grayish hyaline, the stigma pale yellow, veins dark brown. Length, ♂, 5 mm.; largest ♀, 6 mm.

In woods at Goose Neck, Shrewsbury River, near Long Branch, N. J., June 9-12, 1902.

Vernacular Names Again.

By J. Chester Bradley.

Dr. Doran's interesting article in the November issue of the Ent. News, while of value in its aim to secure better English in writing vernacular names, has suggested to me the real absurdity of these names themselves. The aim of science is to be precise, and precision in designating an insect is amply secured by our system of latin nomenclature, with which the entomologist should rest content, using only such vernacular names for the lay understanding as have been thoroughly established by popular usage, and should not himself try to coin vernacular names for the masses to accept. Such words as mud-wasp, blister-beetle, potato-bug, bumble-bee and others that popular usage has sanctioned as good English words, are never in danger of being abused. But when the Entomologist tries to coin them he generally makes a dismal failure. Certainly anybody who is able to learn what insects are meant by such terms as *raspberry gouty gall beetle*, *red necked blackberry gall maker*, *red humped apple tree caterpillar*, and numerous others, will experience no greater difficulty in learning their only precise names—the latin ones—and to a person who is not acquainted with the insects meant, the names must seem absurd in the extreme. "What," such a one might wonder, "are the red necked blackberries, the red humped apple trees, and is the raspberry beetle truly afflicted with gout?"

Dr. Skinner calls my attention to the fact that Strecker described a Chalcid—*Smicra bimaculata*—in the Annual Rep. on Explor. and Surv., Dept. of the Missouri (Appendix SS to Rep. Chief Engineers for 1878). This species has heretofore escaped the notice of our cataloguers and recorders. Where is the type?—J. Chester Bradley.

ENTOMOLOGICAL NEWS.

[The Conductors of ENTOMOLOGICAL NEWS solicit and will thankfully receive items of news likely to interest its readers from any source. The author's name will be given in each case, for the information of cataloguers and bibliographers.]

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PHILADELPHIA, PA., JANUARY, 1903.

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Entomological Literature.

Ricerche sull' apparato di secrezione e sul secreto della Coccinella 7-punctata L. Pel Dott. ANTONIO PORTA. Con una tavola. Anatomischer Anzeiger, Jena, Oct. 24, 1902. Pp. 177-193.—In this paper Dr. Porta presents the results of a study of the nature, physiological action and source of the yellow secretion emitted by this Coccinella, when irritated, in both larval and adult stages. They disagree so much from previous ideas as to be worth noticing here. The secretion escapes by a fissure at the apex of each femur in the adult (as previously known), and by pairs of openings at some of the intersegmental abdominal articulations of the larva; it is orange-yellow in color, astringent and disgusting in taste, has a fresh-pea odor; is soluble in distilled water, absolute alcohol and ammonia; insoluble in acetic ether, acetic acid, sulphuric ether, and chloroform; has a very sensible acid reaction; responds to Pettenkofer's test for bile acids, but not to Günzberg's or Boas' tests for hydrochloric acid, or to Gmelin's test for bile pigments; spectroscopically examined, it is described as approaching urobilin; microscopically studied, it contains numerous globules, granular and homogeneous bodies of various sizes and shapes, evidently on the way to dissolution. The weight of the secretion of one individual was determined by placing the beetle on filter paper, stimulating it, preferably by an electro-magnetic machine, and weighing the paper before and after; this precaution was necessary, as the liquid quickly evaporates. From a number of experiments the average weight of the secretion is given as .0026 gram. To obtain the secretion in solution in large quantities, a number of Coccinellæ (90-500) were placed in a definite quantity of water; the coldness of the latter, together with mechanical irritation by a forceps, caused a flow of the secretion. Hypodermic injections of such solutions always produced paralysis in frogs, tritons, guinea-pigs and rabbits, followed in some cases by death. Paralysis or death was proven, by appropriately arranged experiments, to be due to the effect of the venom on the medulla oblongata, not on the spinal cord nor on the heart, the latter in frogs continuing to pulsate after death. Relatively strong hypodermic injections into other insects produced temporary immobility but not death; living insects confined with living Coccinellæ were not affected sensibly, although there were numerous yellow stains on the box showing that the secretion had been emitted. It is hardly necessary to say that the quantities of secretion injected were greatly in excess of that produced by a single Coccinella. Coccinellæ offered to and swallowed by frogs were soon vomited.

As to the source of this secretion, and this is the most novel of his results, Dr. Porta completely disagrees with Leydig and others who asserted the secretion to be ejected blood. Finding that the mid-intestine likewise responds to Pettenkofer's test, he believes that the follicles situated in the meshes of a network of connective tissue between the muscle-

fibres of the intestinal wall, produce the secretion. These follicles have been regarded by earlier authors as furnishing digestive juices; Dr. Porta finds them in all insects which he has examined. Ordinarily, he supposes, the product of these follicles is poured into the intestinal cavity, but when the insect is irritated the intestine is contracted "and the liquid which it contains passes into the cœlomic cavity (the walls of the intestine being porous) and thence escapes by the fissure described by Lutz, which is found in the articulation of the leg at the extremity of each femur." Other arguments which are cited in support of this view are that the swiftness of the blood current, as observed in transparent insect larvæ (e. g. Ephemerids), would preserve the blood from mixing in the cœlom with this expressed intestinal content; that the bodies in the secretion considered by Leydig to be blood corpuscles are mere accompaniments like salivary corpuscles in saliva; that the elasticity of the intestinal wall would permit passage of the intestinal contents through it; that when irritation of a Coccinella larva is prolonged, after the yellow secretion, there follows from the same apertures, "a black or greenish liquid, which is none other than the ingested material which has already undergone the first digestive modifications;" "finally the relation between the quantity of liquid secreted and the condition of the animal is easily shown, the biliary secretion being in correlation with the alimentary substances contained in the mid-intestine, there being none when fasting is prolonged."

From the physiological point of view the asserted existence of biliary acids in this insect is particularly interesting. Dastre and Florescq stated, as recently as 1898, "To our knowledge, biliary acids have never been met with in invertebrates whose hepatic secretion has been procured" (Archives de Physiolgie, Paris, xxx, p. 210). It may also be noted that Dr. Porta states "The isolated Malpighian tubes do not give Pettenkofer's reaction."—P. P. C.

CORRECTIONS.

ENT. NEWS, Dec., 1902, p. 303, line 3 from bottom, for *Euhagenia* read *Euhagena.*

ENT. NEWS, Dec., 1902, p. 318, line 6 from bottom, for Temple read Tempe.—T. D. A. COCKERELL.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

THE following visiting entomologists have recently been studying the collections of the American Entomological Society and the Academy of Natural Sciences of Philadelphia. Dr. Walther Horn, Berlin; Mr. Wm. Beutenmuller, New York; Mr. Rolla P. Curry, U. S. National Museum, Washington, D. C.; Mr. August Busck, U. S. Depart. Agric., and Mr. H. A. Ballou, Amherst, Mass.

Dr. L. O. HOWARD recently gave an interesting lecture before the Stille Medical Club of the University of Penna. His subject was mosquitoes in their relation to yellow fever and malaria.

A swarm of bees chased Willie, Till the boy was almost wild,
His anxious parents wondered why the bees pursued the child.
To diagnose, they summoned their physician, Dr. Ives,
"I think," he said, "the reason's clear, our Willie has the hives."
--WIDOW.

THE ELM LEAF BEETLE FOUND AT ITHACA, N. Y.—On July 13, 1902, Mr. P B. Powell, a student, discovered the egg shells, young and nearly full-grown grubs of what seemed to be *Galerucella luteola* on several elm trees along University Avenue, which leads to the Cornell campus from the city. The infestation was slight, only a few branches on a dozen trees being affected. On July 16th, Mr. Powell found the beetle, and on July 26th his larvæ pupated and the beetle emerged August 2d. We also reared some of the beetles August 7th. They were the genuine elm leaf beetle.

A second brood appeared on the trees in August. On August 23d Mr. Powell found eggs and young grubs, and on the 30th he got one of the beetles at an electric light. This second brood did not seem as numerous as the first one in July. It is reported that elms on Renwick flats, near the city, are also infested. The many elms which line the streets of Ithaca, the "Forest City," and especially the grounds of Cornell University, will afford fine pasturage for this serious pest if it thrives here as in the Hudson Valley.—M. V. SLINGERLAND, Cornell University.

"IM SO TIRED this morning," said the first moth.
"Up late last night?" asked the second.
"Yes," replied the first. "I was at a camphor ball."—*St. Paul Globe*.

I READ with interest Prof. Doran's article on compounding insect names in the November number of ENT. NEWS. I can agree with most of the author's tatements and the concrete examples submitted.

There are two names in his list, however, which I would compound otherwise. They are "cigar-case bearer" and "pistol-case bearer." I think these are not in strict accordance with his rule 2. Both these insects are "case-bearers," that is caterpillars live in cases. One has a case shaped like a cigar and the other's case resembles a pistol in shape. Hence they are strictly "cigar-shaped case-bearers" and "pistol-shaped case-bearers," and their cases are not shaped like a "cigar-case," and in the case of the "pistol," it is not the "case" of the pistol that is referred to, but simply the pistol-shape of the caterpillar's case. I would now write them: "cigar case-bearer" and "pistol case-bearer," but in bulletins on both these insects (Bulletins 93 and 124, Cornell Experiment Station), I compounded the three words, thus: "cigar-case-bearer" and

"pistol-case-bearer," To bring out the full meaning, as noted above, the word "shaped" should be compounded with the first word of the names. I now think the first hyphen, as used in the bulletins mentioned, is unnecessary.

I hope Prof. Doran will insist on the form, "codling-moth" and protest against the horticultural use of the form, "codlin moth."—M. V. SLINGERLAND.

Doings of Societies.

At the November meeting of the Feldman Collecting Social held at the residence of Mr. H. W. Wenzel, 1523 South Thirteenth Street, Philadelphia, eleven persons were present.

Mr. H. W. Wenzel enumerated some of the more important captures of his recent trip into the mountains of North Carolina.

Mr. Beutenmuller stated that the faunas of the Black and Blue Ridges of North Carolina were quite distinct, probably owing to a difference in the timber. He showed a wood-boring roach, and a probable new species of *Anthophilax*, both from North Carolina.

Mr. H. W. Wenzel referred to the similarity of the insect faunas of North Mountain, Pa., and the mountains of North Carolina.

Prof. J. B. Smith stated that he had bred twenty species of mosquitoes during the past season in New Jersey. But one New Jersey species, *Conchyliastes musicus*, is not known in the larval stage, but he suspected that a larva now in his possession may represent it. He spoke of a new species, *Culex melanurus*, from New Jersey. From sods, with the eggs of the salt-marsh species, from Anglesea, N. J., which he had kept dry and then placed in water, *Culex tæniorhynchus* only had been raised; but from sods from the same locality which he had kept wet, both *tæniorhynchus* and *sollicitans* emerged. *C. solicitans* is the common, and apparently the only, species found where the sods were gathered, and the speaker suggested the possibility of *tæniorhynchus* and *sollicitans* being forms of one species. He expected to investigate the matter more thoroughly next year.

In reply to Mr. Wenzel, Prof. Smith stated that he had bred five species from salt water, including one which, while dis-

tinct in the larval stage, cannot be distinguished from *Culex sylvestris* in the imago. Pools of water left by a high tide on the meadows on Sept. 4, were alive with larvæ on the 5th and 6th, showing that the eggs must have been deposited in dry spots previous to submergence. *C. sollicitans* always oviposits in dry places, the greater portion of eggs never reaching the adult stage.

Mr. Daecke exhibited a species of *Lachnus* which feeds on *Platanus occidentalis*, and had been found commonly in Philadelphia on September 18th, but on the 19th it had entirely disappeared.

WILLIAM J. FOX, *Secretary*.

The Chicago Entomological Society held a regular meeting Nov. 20th, 1902, in the John Crerar Library. Twelve members present. Visitor, M. E. Hoag. President Longley in the chair.

Mr. Melander and Dr. Williston were elected members.

The question of affiliation with the Chicago Academy of Sciences was brought up and discussed. It was agreed that no official action should be taken until more members were heard from.

The program for the evening was a talk by W. L. Tower, on the habitat of the genus *Leptinotarsa* Stahl, and the migrations of the Colorado potato beetle, *L. 10-lineata*. With the aid of a map he clearly and interestingly illustrated the spread of this beetle from its original habitat in the foothills along the eastern side of the Rocky Mountains to its fairly general distribution throughout the eastern half of the United States and Canada, except in the Gulf and South Atlantic States. Working its way eastward on its native food plant, *Solanum rostratum* it met, about 1859, the western spread of population, and with the Irish potato, *Solanum tuberosum*, in western Kansas. From that date it rapidly worked its way eastward, spreading as it advanced, northward into Canada and southward into the upper tier of Southern States, until in 1874 it had reached the Atlantic seaboard. Adjourned 9.55 P. M.

JOHN COMSTOCK, *Secretary*.

EXCHANGES.

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Specimens will be named under the following conditions: 1st, The number of species to be **limited to twenty-five** for each sending; 2d, the sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly; 4th, All insects must be mounted. Exotic species named only by special arrangement with the Editor, who should be consulted before specimens are sent. Send a 2-cent stamp with all insects for return of names. **Please put date of capture and exact locality on each specimen.** Before sending insects for identification, read page 41. Vol. III. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

Lepidoptera.—Superb examples of *Hemileuca tricolor, Catocala chelidonia, babayaga, Pam. python, Apatura leila* and other extreme rarities in exchange for species of equal interest. O. C. Poling, Quincy, Ills.

Cocoons of *Samia Cecropia* to exchange for cocoons of other Lepidoptera. Mrs. J. M. McNamar, 2020 Franklin Avenue, Toledo, Ohio.

I will make collections in the Mississippi Valley of Diurnal Lepidoptera in exchange for specimens of other localities. C. H. Ross, Burlington, Iowa.

Lepidoptera.—North American Lepidoptera for exchange for other North American specimens new to my collection. Send lists to Otto Buchholz, 602 Adams Ave., Elizabeth, N. J.

Chionobas katahdin.—I have a few specimens to exchange for other rare Lepidoptera. Send list of rarities only. I most desire Bombycidæ, Sesiidæ, Cossidæ, Hepialidæ, etc.—H. H. Newcomb, 35 Court Street, Boston, Mass.

I have some specimens in papers of the rare and beautiful *Amp. versicolor*, and also live pupæ of *Paonias astylus* and *Sphinx eremitus*. Exotic and European butterflies to exchange for Native *Sphinx* and *Catocala*.—Chas. F. Timm, 131 Ralph St, Brooklyn, N. Y.

Lepidoptera.—Rare North American *Catocala* in exchange for others of the same genus. Will also exchange other species and live pupæ for native and exotic Lepidoptera.—H. J. Erb, 322 E. 13th St., New York.

Lepidoptera.—Western and northern Argynnids especially desired, but will exchange for anything new to collection or for perfect specimens of less rare material. I offer *Chionobas æno. brucei, uhleri* and *chryxus; Colias meadii, alexandra* and *scudderi; Melitæa brucei, minuta*, etc. Also many Argynnids and local species of Catocalæ.—Arthur J. Snyder, Belvidere, Ill.

Wanted.—Live pupæ of all kinds of native Sphinx in exchange for good papered material as *A. angulifera, Sp. luscitiosa* and others. George Kircher, 573 Germania Ave., Jersey City Heights, N. J.

Lepidoptera.—Have many fine things from the West and South to exchange. Lists solicited. John & Hurd Comstock, 1572 Ridge Avenue, Evanston, Ill.

Lepidoptera.—I have 200 to 300 species to offer in exchange. Prefer mounted specimens. A. Kwiat, 701 Larrabee St., Chicago, Ill.

Lepidoptera —Wanted for cash or exchange. Living pupæ of North American Lepidoptera. Am. Ent. Co., 1040 De Kalb Avenue, Brooklyn, N. Y.

Lepidoptera.—Wanted pupæ of North American species for cash or exchange. American Ent. Co., 1040 De Kalb Ave., Brooklyn, N. Y.

Lepidoptera.—I desire exchange with collectors in all parts of North America, particularly Northwest and Southwest. No exotics. John L. Healy, 1137 Pratt Ave., Chicago, Ill.

I wish to secure, at once, specimens of all forms of *Satyrus alope* and *pegala* from all parts of U. S., accompanied by complete data Will give good exchange or cash. John L. Healy, 1137 Pratt Ave., Chicago, Ill.

Will exchange California specimens *Attacus ceanothi* cocoons, etc., for flies caught in other places that also inhabit California.—J. E. Cottle, 1520 Pacific Avenue, San Francisco.

Coleoptera.—Gustav Krech, Bartenstein, East Prussia, Germany, wants American Coleoptera in exchange for European.

Coleoptera.—Civillehrer Barkowski, Bartenstein, East Prussia, Germany, wants American Coleoptera in exchange for European.

Wanted.—Rept. Entom. N. J., 1899.—Rept. U. S. Dept. Agri., 1887. —Separata of articles on Hymenoptera; also *Cossus, Hepialus, Micropteryx, Cis. Cupes, Parandra, Rhyssodes.* ♀ of *Methoca, Myrmosa, Chyphotes;* Chrysids; Bees and Wasps. *Melanoplus collinus, rectus,* ♂ *punctulatus; Dictyophorus Asemoplus, Paratylotropidia, Haldemanella, Dactylotum, Ligurotettix, Morsea.*—W. H. Patton, Hartford, Conn.

Butterflies.—Good ones. From West Texas, Colorado and Missouri. One hundred species in duplicate. Also a few rare Catocalæ. Exchange for butterflies and Catocalæ of N. A.—G. M. Dodge, Louisiana, Mo.

N. A. Lepidoptera and their living pupa wanted. Will give in exchange exotic Lepidoptera.—Denton Brothers, Wellesley, Mass.

Will collect to order, next summer, insects of Guadalajara, Mexico.—J. F. McClendon, 3200 Guadalupe Street, Austin, Tex.

I have a complete set and index of Insect Life, also some odd numbers to exchange for works on Coleoptera not in my library.—L. H. Joutel, 164 East 117th Street, N. Y.

Lepidoptera.—I would like to exchange fertile eggs of *Catocala electa* and *nupta* for others of same genus.—Carl Ilg, 2539 Douglass Street, Philadelphia.

Lepidoptera—Odonata.—Wish to secure specimens of Butterflies and Dragonflies from North Carolina, of species not in my lists or collections. Correspondence invited.—Franklin Sherman, Jr., Dept. Agr., Raleigh, N. C.

Wanted.—North American *Geometridæ*. eastern and southern species (many of the commonest). Offered Lepidoptera, Coleoptera and Hemiptera, many good species, from British Columbia.—Geo. W. Taylor, Wellington, B C.

Catocala Andromache.—Will be supplied in exchange to a few of the larger collections while my duplicates last. O. C. Poling, Quincy. Illinois.

Please Notice.—After October 15th, 1902, my address will be College Station, Brazos Co., Texas.—E. Dwight Sanderson.

Wanted.—Geometers, named or unnamed, in exchange; also noctuids and Microlepidoptera —Wm. H. Broadwell, 275 High St., Newark, N. J.

Lepidoptera.—I would like to correspond and exchange with some new beginners. I have live cocoons of *Telea polyphemus and Samia cecropia* to exchange for cocoons of others, especially cocoons of *Cynthia* and *Luna* moths.—J. N. Lang, 104 Bunker St., Chicago, Ill.

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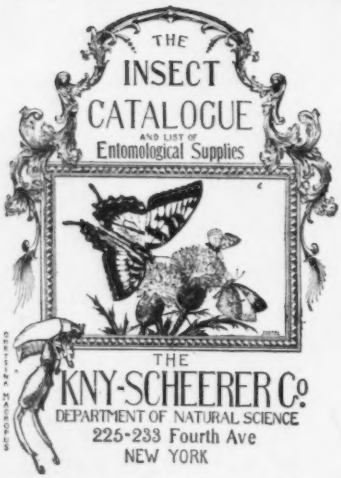

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